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Northeast Ohio's Waterways: Lakefront Planning Issue Forums Summary Report Utilities and Railroads

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Northeast Ohio's Waterways:
Lakefront Planning Issue Forums
Summary Report

Utilities and Railroads

Date: October 2, 2002

Venue: Cleveland State University, Maxine Goodman Levin College of Urban Affairs, Atrium

Moderator: **Vera Vogelsang-Coombs**, Masters of Public Administration Program Director, Maxine Goodman Levin College of Urban Affairs, Cleveland State University

Panelists: **Robert M. Bonner**, Manager of Engineering and Planning, Cleveland Public Power
Lee Pyzik, Acting Director of Consolidated Plants North, First Energy Solutions
Marlene Sundheimer, Deputy Commissioner, Water Division City of Cleveland, Division of Water
Betsy Yingling, Planning Engineering, Northeast Ohio Regional Sewer District
William J. Harris, Resident V.P. Public Affairs, Norfolk Southern Corporation

The following is a summary of the Lakefront Planning Issue Forum on Utilities and Railroads. According to a study done by the Cuyahoga County Planning Commission, approximately 139 acres of lakefront property are utilized for transportation or utilities. This does not include the railroad and telecommunications right of way that extends the entire length of the lakefront. Because these facilities and their underground infrastructure are such prominent features of the lakefront, they play a key role in planning discussions.

The forum presented information about the existing and future needs for utility and railroad infrastructure along Cleveland's lakefront, including the location of utility plants, water and sewer pipes, power cables, and the rail system. Several other related issues that will affect lakefront planning decisions were also presented and are summarized below.

Utilities and Railroads

Fast Facts

Cleveland's lakefront is the site of:

- Two electricity production, transmission and distribution plants (CPP's Lake Road Plant and First Energy's Lakeshore Plant).
- Two water intake and treatment plants (Kirtland pumping station and the Garrett Morgan plant).
- Two sewage treatment plants (Westerly and Easterly treatment plants)
- Two major freight carrying railroads (CSX and Norfolk Southern) and Amtrack rail infrastructure.
- The Greater Cleveland Regional Transit Authority's Waterfront Line.

CPP obtains substantially all of its power and energy requirements through short and long-term agreements with various regional utilities and other power suppliers through three FirstEnergy interconnections.

FirstEnergy's Lake Shore Plant's net demonstrated capacity is 240 MW. Significant transmission and distribution facilities on the site serve Cleveland area businesses and residences as well as delivering power to Cleveland Public Power.

The Garrett A. Morgan Waterworks Plant on West 45th Street can produce 150 million gallons of potable water per day and the Kirtland Pumping on East 49th Street can produce up to 165 million gallons of potable water per day.

NEORSD serves businesses and residences in 295 square miles of Greater Cleveland through the operation of three wastewater treatment facilities that are fed by 206 miles of interceptor sewers.

Background

Cleveland Public Power (CPP)

Cleveland began producing its own electric power in 1907, when it annexed the Village of South Brooklyn and its power station, today known as the West 41st Street Station.

When completed in 1914, the 15,000-kilowatt Lake Road Plant (5152 North Marginal Road) was the largest municipal power plant in the United States.

Under the state's constitution and the city's charter, the city has the authority to own, operate and regulate CPP. The city's Department of Public Utilities operates CPP solely to provide electric energy to its citizen-customers.

Today, CPP is still the largest municipal power company in the state of Ohio but obtains substantially all of its power and energy requirements through short and long-term agreements with various regional utilities and other power suppliers through three FirstEnergy interconnections.

FirstEnergy

FirstEnergy owns and operates the Illuminating Company, Ohio Edison, and Toledo Edison, delivering electricity to 741,000 customers in Northern Ohio.

When FirstEnergy acquired the Illuminating Company (formerly Cleveland Electric Illuminating or CEI), it became the owner and operator of the Lake Shore Power Plant on the South Marginal Road.

Today, the Lake Shore Plant's net demonstrated capacity is 240 MW. Significant transmission and distribution facilities on the site serve Cleveland area businesses and residences as well as delivering power to Cleveland Public Power.

Cleveland Division of Water

The first major water facility built on the Cleveland lakefront was a tunnel constructed under the lake bed that ended in a collection point, called a "crib." Work on the 87-foot diameter crib began in 1867 and took seven years. By the late 1950s, the water distribution system included four intakes stretching between 2.5 and 4 miles into Lake Erie.

In 1917 the Division Avenue Water Treatment Plant (later named the Garrett A. Morgan Waterworks Plant) opened on West 45th Street with the latest in water filtration and treatment technology. Today the plant can produce 150 million gallons of potable water per day.

In 1927, the Kirtland Pumping Station was opened at East 49th Street. Linked to the Baldwin Water Treatment Plant on Stokes Blvd., Kirtland provides the water that allows Baldwin to produce up to 165 million gallons of potable water per day.

Northeast Ohio Regional Sewer District (NEORSD)

Northeast Ohio Regional Sewer District (NEORSD) is a political subdivision of the state of Ohio. It was formed by a court order in 1972 after the U.S. Congress passed the Clean Water Act with the goal of restoring the health of our nation's waterways.

NEORSD serves businesses and residences in 295 square miles of Greater Cleveland through the operation of three wastewater treatment facilities that are fed by 206 miles of interceptor sewers.

The Easterly Plant located at 14021 Lakeshore Boulevard began treating wastewater in 1908 and currently serves over 500,000 people in Cleveland and the eastern suburbs to Mayfield Village and Pepper Pike.

The Westerly Treatment Plant, located at 5800 West Memorial Shoreway, next to Edgewater Park, was constructed in 1922 and serves approximately 110,000 people in Cleveland and portions of Lakewood, Brooklyn, and Brookpark.

The Southerly Treatment Plant, located at 6000 Canal Road, was constructed in 1927 and serves over 530,000 people in southern Cleveland and the south and southwestern suburbs to Macedonia, Olmsted Falls, Solon, and Twinsburg.

Railroads

Railroads have had a major impact on Cleveland's lakefront since the first operations began in 1849. Three forms of rail service are present along Cleveland's lakefront today: cross-country freight rail service, intercity passenger rail, and public light rail service.

Norfolk Southern and CSX are the two major railroad companies carrying freight cross-country that have tracks along Cleveland's lakefront.

AMTRAK also owns tracks along Cleveland's lakefront between West 3rd Street and East 26th Street and operates a passenger rail station at 200 Memorial Shoreway (between West 3rd and East 9th

Streets) for passenger travel between east coast cities and Chicago.

The Greater Cleveland Regional Transit Authority operates the Waterfront Line light rail service providing public transportation access between Tower City Center and the lakefront through the Flats Entertainment District with stations at West 3rd, East 9th Street, and the Municipal Parking Lots at approximately East 18th Street.

Issues for Consideration in the Planning Process

The Importance of CPP's Lake Road Plant

Robert M. Bonner: Most people think that because CPP no longer generates energy at its Lake Road plant, that the plant could be shut down or relocated. CPP imports power from many utilities, however, and the Lake Road plant is a key distribution station in the CPP system. It provides backup for both the east and the west sides of Cleveland. The plant sits in the middle of the system and is the key to power flow; there are approximately 30 miles of underground feeds emanating from Lake Road directly to six substations and approximately 38 miles of underground feeds or underground cable that supply all of the different commercial accounts.

The feasibility of relocating the Lake Road Plant

Robert M. Bonner: The cost to design and install one mile of new underground infrastructure is still about $1,000,000 per mile; the cost to move the Lake Road plant would be between $50,000,000 and $100,000,000.

CPP has compiled a five-year plan, which does not identify moneys for relocation of any of its facilities.

The city must consider the consequences that moving the freeway would have on a 138,000-volt cable and a 69,000-volt cable that run parallel to the roadway.

The importance of FirstEnergy's Lake Shore Plant

Lee Pyzik: The plant houses significant transmission and distribution facilities on the site that serve Cleveland area businesses, residences, and CPP. It also plays a key role in maintaining proper voltage for the system.

The feasibility of relocating the Lake Shore Plant

Lee Pyzik: Relocating the facilities would be extremely costly and labor intensive. There are numerous high voltage lines, 6-8 inches in diameter, that run for miles out of the Lake Shore plant in multiple directions.

At about 150,000 gallons per minute, the Lake Shore Power plant is a big user of water. There is also a need for rail access to the Norfolk Southern rail spur to deliver coal to the plant.

The Division of Water's lakefront facilities

Marlene Sundheimer: There are a series of raw intake tunnels and cribs that bring water from the lake into treatment plants and then pump the water out into the system. The raw water is drawn through large diameter intake tunnels into the treatment plants, treated, and, through a series of booster pumps, is pumped out into the system to serve over 1.5 million people in Cleveland and the surrounding suburbs.

The network of trunk mains are approximately 60-inch diameter pipes

that connect the various treatment plants and distribute the supply of water to the system. In some places, the trunk mains located around the Morgan plant are actually underneath the Shoreway.

The Kirtland Pumping Station, located along the South Marginal Road, takes raw water from an intake crib, which is five miles off shore, and pumps that water up to the Baldwin Fairmont Complex where it is treated. The Garrett Morgan Facility at approximately West 45th Street and Division Ave. produces about 150,000,000 gallons of water per day and serves the near west side of Cleveland and the southwest suburbs.

The feasibility of relocating the Division of Water's facilities

Marlene Sundheimer: "The simple answer is, we're not going to relocate our treatment plants and our facilities because we've invested a lot of money in them. And it's not practical, and it's not cost effective."

The Water Division might consider rerouting some of its major trunk veins if they interfere with plans for the lakefront. The plan that has been proposed to change the Shoreway into a boulevard would actually be very beneficial to the Division of Water because it would provide safer access for repairs considering that currently repairs are being made on a high-speed freeway, which is very risky and complicates traffic patterns.

The role of NEORSD's lakefront facilities

Betsy Yingling: The Westerly Wastewater Treatment Plant, at the lakefront near Edgewater Beach, is situated on 14 acres and is the smallest treatment plant, treating 30,000,000 gallons of wastewater a day on average and serving about 110,000 people. The Easterly Wastewater Treatment Plant, at East 140th Street and Lakeshore Blvd. on the east edge of Bratenahl, sits on a larger, 82-acre site, treats 100,000,000 gallons a day, and serves about 370,000 people.

The easterly interceptor travels under Lakeside Avenue, bringing all the wastewater from downtown out to the Easterly Plant.

Several overflow interceptors are along Lake Erie, a number are in the Cuyahoga River, Doan Brook, and other waterways. They are actual pipes that lead out to the lake bringing the overflows in wet weather.

The feasibility of relocating NEORSD's lakefront facilities

Betsy Yingling: It would burden the design of the system over the next 20 or 30 years and burden the taxpayers by costing hundreds of millions of dollars to move treatment plants and associated infrastructure.

The importance of Cleveland's rail system

William J. Harris: Ohio is still a very important state for railroads, and Cleveland is extremely important because the city is on a direct path between the Great Lakes. Freight railroads are especially important for Cleveland because the eastern boundary of the Great Lakes funnels all the traffic from the Northeast down through Cleveland headed to the Midwest and the West.

The benefits of Cleveland's rail system

William J. Harris: The railroad system has several value-added features: Rail moves goods more efficiently through the city, rail is more fuel efficient and environmentally friendly than other modes, and trains are safer because they only travel on their own rights-of-way and do not compete with the public for the roadways or add to highway costs or congestion.

The efficiency of Cleveland's freight networks gives businesses located in Cleveland an advantage. There is much more opportunity to serve businesses and enhance economic development in Cleveland through the ship-rail-truck interface at the Port of Cleveland.

Railroad rights-of-way along the lakefront

William J. Harris: The railroads have optioned their rights-of-way, which are privately owned, by publicly traded companies. Because they are already assembled, they are the preferred pathways for fiber optic cables. The result is that Cleveland has become a hub of fiber optic communication.

The feasibility of relocating rail and fiber optic cables

William J. Harris: The major source of value of the railroad is in the continuity of their assembly and ownership of rights-of-way that continue to have worth today. However, those continuous rights-of-way also pose lake access and safety issues in local communities. Mr. Harris stated that Norfolk Southern would fully cooperate with all communities in resolving issues of providing public access across rail lines in a safe manner.

The railroads have federal common carrier requirements that are imposed on them for the benefit of the national economy and are federally regulated because of our role in interstate commerce. Issues surrounding the railroads are very complex because they involve not only local issues, but also interstate commerce issues and federal issues that might not be readily apparent.

The cost would be in the millions of dollars per mile to relocate the fiber optic lines along the Norfolk Southern and on the CSX lines. Funding for changes would not come from the railroads but would have to be sourced from public funds. It would be much more expensive to move the railroad tracks than the fiber optic cables.